UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,937	12/08/2005	Ryan Carr	P1P155CARR-US	1038

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EXAMINER
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ART UNIT	PAPER NUMBER
3688	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/559,937	CARR ET AL.
	Examiner	Art Unit	
	KHANH H. LE	3688	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 May 2010</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>4-10, 12-35, and 48-78</u> is/are pending in the application.

    4a) Of the above claim(s) <u>4-10,12-18,48-53 and 71-78</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>19-35 and 54-70</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12/08/2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2010-05-13</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

1.   This Office Action is responsive to the correspondence filed 05/20/2010. (The examiner thanks Applicant for pointing out the typographical errors in the last Office Action: indeed it was responsive to Applicant's paper filed 10/16/2006, not the one filed 12/8/2005.The correct claims, filed 10/16/2006, were considered however).

Claims 4-10, 12-35, and 48-78 are pending. Applicants elected Group III: claims 19-24, 25-35, and 54-70 drawn to using block data (see further below). Thus claims 4-10, 12-18, 48-53, 71-78 are withdrawn from consideration.   Claims 19 (system), 25 (system), 54 (method), 60 (method) are independent claims.

(Applicants noted that Claims 71-77 are reinstatements of claims 39-45, respectively. Claim 78 is a reinstatement of claim 47. It is acknowledged the pending claims were found allowable in the International Preliminary Report of Patentability for the associated PCT application PCT/US04/26736. However an updated search uncovered new prior art).

Restriction requirement

2.   In response to the restriction requirement under PCT rule 13.1 and 37 CFR 1.499, identifying:

Group I: claims 4-10, 12, and 71-78;

Group II: claims 13-18 and 48-53; and

Group III: claims 19-24, 25-35, and 54-70,

the applicant elected Group III, drawn to using block data, with traverse.

The applicant traversed on the grounds that the requirement for restriction contained no indication that there would be a significant burden on the examiner in examining all three Groups. The Examiner notes that there is no requirement of asserting significant burden on the

examiner under PCT rules. The Examiner also notes Blasko US 20010049620, and Herz, US 20010014868, which are the basis of the unity of invention restriction requirement, are newly discovered art since examination of PCT/US04/26736. Thus the traversal is unpersuasive and the restriction requirement is hereby made final.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4.   Claims 54-59 and 60-70 are rejected because the claimed inventions are directed to non-statutory subject matter.

Independent claims 54 and 60:

Based upon consideration of all the relevant factors with respect to the claim as a whole, (see "Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of Bilski v. Kappos", issued by the USPTO, July 27, 2010), claims 54 and 60 are held to claim an abstract idea and are therefore rejected as ineligible subject matter under 35 U.S.C. § 101. The rationale for this finding is explained below:

Here, independent claims 54 and 60 only recite 2 databases storing data, and "providing a computer system having read and write access to said transaction data database and said block data database".

Claim 60 does not recite any steps that necessarily involve machine implementation. Here, the method is not tied to a machine except for the nominal recitation of providing a

computer system having access to some databases, without any recitation of use of the computer in any of the core method steps of estimating, or determining whether to target market. Thus the computer system is recited only as used to access databases, i.e. for data gathering. This is analogous to the nominal recitation of "computer-implemented" in the preamble of a method claim without any recitation of use of a computer in any of the method steps. Such nominal use of a computer (or recitation of a computer only in the preamble) does not pass muster under present understanding of 35 U.S.C. 101. See e.g. a similar analysis in Ex Parte Langemyr, USPTO Board of Appeals and Interferences, Appeals 2008-1495 (Informative Opinion) http://www.uspto.gov/web/offices/dcom/bpai/its/fd081495.pdf (rationale at page 20). (bold emphasis added)

> *"While Appellants' claim encompasses a "particular machine" embodiment for creating a mathematical expression of a combined physical system, the claim is not limited to such an embodiment. Appellants' claimed method steps, as recited in the body of claim 1, are not limited to process steps using particular structure or apparatus. To the contrary, looking only to the method steps recited in the body of claim 1, they would reasonably be interpreted to encompass a human being performing these steps. The Appellants' claim 1 preamble includes only a **nominal recitation of a "computer apparatus." Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process.** See Benson, 409 U.S. at 71-72. **As Comiskey recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter."** Comiskey, 499 F.3d at 1380 (citing In re Grams, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). **Incidental physical limitations, such as data gathering, field of use limitations, and post-solution activity are not enough to convert an abstract idea into a statutory process.** In other words, nominal or token recitations of structure in a method claim do not convert an otherwise ineligible claim into an eligible one. To permit such a practice would exalt form over substance and permit claim drafters to file the sort of process claims not contemplated by the case law. Cf., Flook, 437 U.S. at 593 (rejecting the respondent's assumption that "if a process application implements a principle in some specific fashion, it automatically falls within the patentable subject matter of [Section] 101," because allowing such a result "would make the determination of patentable subject matter depend simply on the draftsman's art and would ill serve the principles underlying the prohibition against patents for 'ideas' or phenomena of nature.").*
>
> *In this case, we decline to allow clever claim drafting to circumvent the principles underlying the Supreme Court's interpretation for "process." The only recitation of structure is in the nominal recitation in the preamble citing a "method executed in a*

computer apparatus." This recitation is so generic as to encompass any computing system, such that anyone who performed this method in practice would fall within the scope of these claims. Thus, the recitation of a computer apparatus in the preamble is not, in fact, a limitation at all to the scope of the claim, and the claim is directed, in essence, to the method performed by any means.

 As such, we fail to find that this recitation alone requires the claimed method to include a particular machine such that the method qualifies as a "process" under Section 101. We will not allow such a nominal recitation in the preamble to convert an otherwise ineligible claim into an eligible one."

Hence here, for claim 60, there is no tie to a specific machine or insufficient recitation of a machine. All core inventive steps can be done mentally and/or manually with pen and paper.

Claim 54 suffers the same defects. The core inventive step of estimating is recited without use of the computer. Further, *"[U]sing data stored in both said…database and said ..database to estimate.."* means the computer is used for data gathering only while the core estimating step can be done mentally and/or manually with pen and paper.

Thus for both claims 54 and 60, there is at least insufficient recitation of a machine. The involvement of the machine, is merely nominally, insignificantly, or tangentially related to the performance of the steps, e.g., in data gathering only; or merely recites a field in which the method is intended to be applied.

Nor do the methods of 54 and 60 transform underlying subject matter (such as an article or materials) to a different state or thing.

Thus claims 54 and 60 are deemed non-statutory since there is insufficient recitation of a machine or transformation.

Claims 55-59, and 61-70, dependents of claims 54 and 60, respectively, suffer from the same defects. Note the various determination and estimation steps of these claims can all be done mentally, or with pen and paper.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   **Claims 19-24, 25-35, and 54-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conkwright et al, US 7302419 in view of Blasko, US 20010049620 and Herz US 20010014868.**

Independent on claims 19 and 54:

CONKWRIGHT discloses monitoring set top boxes (STB) by monitoring individual users interaction with the STB events and correlating set-top box events with probable demographic characteristics. See abstract.

Thus CONKWRIGHT discloses:

A system and method comprising providing:

a transaction data (users interaction with the STB events) database;

wherein said transaction data database stores a plurality of consumer records each including at least a CID data indicating a consumer CID (consumer identification data or STB

geo-coded ID, see col. 4 lines 61-67) and a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data (CONKWRIGHT 's probable demographic characteristics, see abstract) for customers of a local data center broadcasting to local STB's (the local data center is the equivalent of a retail store);

Conkwright discloses arrays (databases) corresponding to a geographical region (Col 14 line 45-60); market data collection; answers to queries for a certain demographic along a geographical region or zip (col 21 l. 36-39); manipulation of datasets (col 21 l. 49-57); determination of a percentage of a population of a region that falls into a query category (col. 21 lines 59-61; col. 23 lines 25-34).

Thus CONKWRIGHT discloses:

a block data database (corresponding to geographic regions) ;

"wherein said block data database stores at least one block data record for a geographic region, each block data record storing, for its corresponding geographic region, a number of people or consumers residing in that region, and a number of people or consumers having said specified demographic value (inherent so that answers to queries for a certain demographic along a geographic region or zip, col 21 l. 36-39, can be done);

CONKWRIGHT does not disclose physical retails stores. However, Blasko, in same STB art as CONKWRIGHT, discloses profiling of STB also applies to retail stores. [0083]. (Note that Blasko also discloses geographically- based databases are well-known [0146]).

Thus, if one's industry is retail shops, one would be motivated to apply the CONKWRIGHT's predictive method to retail stores since these methods can be applied equally in both arts, as taught by Blasko.

Further, Herz US 20010014868 teaches system for automatic determination of customized prices and promotions based on extensive consumer profiles databases collected at the point of sale ([0262]: transaction records correlated to customer ID's) including past transaction histories and reactions to promotions (abstract, [0024]). Thus it would have been

obvious to replace the CONKWRIGHT's STB consumer data with Herz's retail store consumer data, if market research for targeting purposes by a physical retailer is desired.

Since CONKWRIGHT has database of consumers transactions and has databases organized along geographical parameters with attributes of the consumers, and since CONKWRIGHT also discloses determination of a percentage of a population of a region that falls into a query category (col. 21 lines 59-61; col. 23 lines 25-34), it is interpreted CONKWRIGHT discloses:

means or code for using data stored in said both said transaction data database and said block data database to estimate said fraction of people having a specified demographic value and live in said specified block region.

Since CONKWRIGHT discloses determination of a percentage of a population of a region that falls into a query category (col. 21 lines 59-61; col. 23 lines 25-34), it would have been obvious for a store to use the method of CONKWRIGHT to determine a percentage of a population of a region that falls into a query of "buying at this retail store" category. This is just market share analysis. CONKWRIGHT discloses that its invention is for market research as well as to plan services including advertisers'. Col. 34 lines 20-28. This reads on making decisions whether to market based on such market research. A physical retail store would be motivated to apply the market analysis method of Conkwright to determining whether to advertise or not based on such market research. That is, a store would like to find out how many of its purchasers live in its surrounding neighborhood to assess its chance of marketing success. Since Conkwright method of determination of a percentage of a population of a region that falls into a certain query category (col. 21 lines 59-61;col. 23 lines 25-34) allows such market research, it would have been obvious to one having ordinary skill in the art at the time of the invention (herein a "PHOSITA") to use Conkwright method to answer the query of the fraction of buyers of this store that live in the neighboring region. Further since Conkwright and Blasko and Herz teach many consumer demographic factors can be studied for targeting purposes, it would have been obvious to a PHOSITA to further the inquiry to include another demographic factor such as

submitting to the Conkwright-Blasko-Herz system a query such as "what is the fraction of 20 year old females that shop in this Alexandria,VA store and live in Alexandria,VA?"

Thus in the physical retail store context, CONKWRIGHT in view of Blasko and Herz disclose:

A system for estimating a fraction of people having a specified demographic value that both shop in a specified retail store and live in a specified

block region comprising:

means or code for using data stored in said both said transaction data database and said block data database to estimate said fraction of people having said specified demographic value that both shop in said specified retail store (e.g. the 20 year old females that shop at the store being the CONKWRIGHT's "query category") and live in said specified block region. Note that CONKWRIGHT teaches analysis of data within and between datasets in a variety of means. (col. 6 lines 4-6). Note also that "assumed non-transaction demographic data for customers of said retail store" is not claimed as being used in the estimation of the fraction, thus is given little if any patentable weight.

Thus, CONKWRIGHT in view of Blasko and Herz, at the citations above, and as discussed above, also disclose:

Claims 20, 55 (dependent on claims 19, 54):
further comprising means or code for generating a decision whether to target market to consumers associated with said specified demographic value that live in said geographic region (see discussion above).

Claims 21, 56 (dependent on claims 19, 54):
further comprising means or code for determining a number of consumers associated with said specified demographic value that live in said geographic region (this step is inherent in order to calculate the fraction as discussed above).

Claims 22, 57 (dependent on claims 21, 54):

further comprising means or code for determining whether to target market to consumers in said geographic region based upon either said number of consumers associated with said specified demographic value that live in said geographic region or an estimate of a ratio of number of consumers associated with said specified demographic value that live in said geographic region to total number of consumers that live in said geographic region (as discussed above this means based on determined market share to decide to target further or not).

Claims 23, 58 (dependent on claims 19, 54):

Official Notice is taken that studying the revenue potential for a business, of a segment of consumers, from their past spending behavior at the business, is old art. Thus it would have been obvious to add to the market research and targeting (including whether to target) system along geographical lines of Conkwright-Blasko-Herz system, "means or code for determining an estimate of total value of goods purchased from said retail store by consumers associated with said specified demographic value that live in said geographic region" in order to study the market and make the targeting decisions along that parameter.

Claims 24, 59 (dependent on claims 23, 58):

Official Notice is taken that studying the revenue potential for a business, of a segment of consumers, from their past spending behavior at the business, as compared to their total purchasing power, is old art. Thus it would have been obvious to add to the market research and targeting (including whether to target) system along geographical lines of Conkwright-Blasko-Herz system, "means or code ..to estimate of either said total value of goods purchased from said retail store by consumers associated with said specified demographic value that live in said geographic region to total value of goods purchased in said block region from consumers having said specified demographic value" to allow market research and making targeting decisions based on that parameter.

Claims 25-27 and 60-62:

Independent claims 25 and 60 are similar to claim 19 or 54 except for the variable being associated with the consumer being" a specified value or range of values for a specified transaction history variable"; Herz discloses a certain monitored value is e.g. particular products purchased.

(See e.g. Herz, [0005]:*"shoppers can be profiled in terms of both their demographic characteristics (age, income, family structure, ethnicity, and the like) and their past shopping behavior* (products purchased, *length of time since last purchase, allocation of browsing time, attention span, price* sensitivity, interest in detailed features, impulse buys, use of coupons, and the like).";

Thus it would have been obvious to a PHOSITA to study the market share (estimate of a fraction as taught by CONKWRIGHT as discussed above), as to a specified transaction history variable (e.g. a certain product as taught by Herz), to determine whether to target such a group of consumers as taught by Herz.

Thus CONKWRIGHT in view of Blasko and Herz disclose:

A system for determining whether to target market to consumers residing in a block regions, *comprising: a transaction data database; a block data database; a computer system having read and write access to said transaction data database and said block data database;*
wherein said transaction data database stores a plurality of consumer records each including at least a CID data (consumer identification data) indicating a consumer CID for a customer of said retail store;
wherein said block data database stores at least one block data record for a geographic region near the location of the retail store, each block data record storing, for its corresponding geographic region,
a number of people or consumers residing in that region,
a number of people or consumers residing in said **region that have a specified value or range of values for a specified transaction history variable;**
means or code for estimating either a fraction or an absolute number of **consumers residing in said block region having transaction data** *having either said specified value or said range of values for said specified transaction history variable* **to define an estimate of said fraction or said absolute number; and**
means or **code for determining whether to target market to either said block region** *or to*

*at least one consumer **residing in said block region based upon at least said estimate** of said fraction or said absolute number;*
wherein said means or code for
*estimating estimates **a fraction** of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable.*

Note for claims 26 and 61, in order to calculate a fraction, as in claim 26 or 62 as taught above, one inherently would have to estimate an absolute number of consumers.

Claims 28-32 and 63-67 (dependent on claims 25 or 60):

Official Notice is taken that the following parameters are well-known to have been monitored for analysis of consumer behaviors:

quantity of spending in a prior time period;

quantity of purchase of a specified product in a prior time period;

quantity purchase in a specified class of products in a prior time period;
a measure of redemption of transaction incentives In a prior time period;

a measure of redemption of transaction incentive in a specified class of transaction incentives in a prior time period;

(See e.g. citations to Herz above for support of some of the Official Notices).

Thus it would have been obvious to monitor such "specified transaction history variable" and add such to the Conkwright-Blasko-Herz system to allow targeting based on the above well-known factors.

The Conkwright-Blasko-Herz system, as discussed above, further discloses:

Claims 33 and 68 (dependent on claims 25 or 60): wherein said means or code for determining whether to target market to either said block region or to at least one customer residing in said block region also depends upon at least demographic data variable (excerpts above).

Claims 34-35 and 69-70 (dependent on claims 25 or 60):

wherein said means or code for determining whether to target market to either said block region or to at least one customer residing in said block region also depends upon at least one derived data variable or upon at least one mixed data variable (CONKWRIGHT teaching analysis of data within and between datasets in a variety of means. (col. 6 lines 4-6) suggests analysis along "derived data variables" or "mixed data variable").

As to Claims 34-35 and 69-70, alternatively, Herz at [0039]: deduced consumer interest, from behavior, or [0039] : rank from 0 to 10, reads on "derived data" or "mixed data variable". Thus it would have been obvious add the parameters taught by Herz to the combination CONKWRIGHT to allow studying along these parameters).

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tiley 7020625 and Deaton 6292786 discloses market share analyses.

Cohagan: 2004/0243468 discloses analysis by geographical zones e.g. [0068].

Patel   US 20040172267 A1 discloses Statistical personalized recommendation system i.e. system recommends items in a domain to users, either individually or in groups, makes use of users' characteristics, their carefully elicited preferences, and a history of their ratings of the items are maintained in a database.

Blume US 6839682 B1 and Lazarus US 6430539 B1 discloses <u>Predictive modeling</u> of consumer financial <u>behavior</u> using supervised <u>segmentation</u> and nearest-neighbor matching.

Jones III   US 6925441 B1 discloses System and method of targeted marketing.

*Katz et al. US 6055513 A Methods and apparatus for intelligent selection of goods and services in telephonic and electronic commerce.

*= provided by Applicants

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh H. Le whose telephone number is 571-272-6721. The Examiner works a part-time schedule and can normally be reached on Monday-Wednesday 9:00-6:00. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, John Weiss can be reached on (571)272-6812. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-3600. For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314). Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Khanh H. Le/
Primary Examiner, Art Unit 3688